AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) A fluid heating device comprising a housing having an internal chamber and a fluid inlet and a fluid outlet in fluid communication with said internal chamber, said fluid inlet and said fluid outlet each opening exteriorly of said housing; a rotor comprising at least one rotary disc disposed in said internal chamber and mounted for rotation within said internal chamber about an axis of rotation, said rotor having a maximum radial extent greater than its maximum axial extent~~; a drive shaft for imparting mechanical energy to said rotor disc and said drive shaft supported in said housing by at least two bearings, one of said at least two bearings being disposed nearer to one end of said rotary disc and another of said at least two bearings being disposed on the opposite disc of said rotary disc; at least one inlet passage and at least one outlet passage formed in said housing, said at least one inlet passage being disposed radially closer to said axis of rotation than said at least one outlet passage~~, said ~~rotary disc~~ rotor having first and second end faces facing more axially than radially and a peripheral outer surface; a drive shaft for

imparting mechanical power to said rotor, and said rotor drivingly connected to said drive shaft; at least two bearings disposed in said housing and said drive shaft rotatably supported in said housing by said at least two bearings where one respective bearing is disposed nearer the first end face and another respective bearing is disposed nearer the second end face; a plurality of openings ~~formed~~ opening on at least ~~a face thereof~~ one of said first and second end faces and disposed radially outwardly from said axis of rotation and radially inwardly of said peripheral outer surface, said openings confronting fluid entering said chamber, wherein rotation of said rotary disc causes said plurality of openings to impart heat-generating cavitation to a fluid entering said chamber.

2. (currently amended) The device according to claim 1, wherein said plurality of openings comprises openings passing through the entire thickness of said at least one rotary disc.

3. (currently amended) The device according to claim 1, wherein said plurality of openings comprises blind openings passing through less than the entire thickness of said at least one rotary disc and having bottoms formed within said at least one rotary disc.

4. (currently amended) The device according to claim 1 wherein said plurality of openings comprises plural concentric circular arrays of openings formed on said ~~face~~ at least one of said first and second end faces.

5. (currently amended) The device according to claim 1 wherein said plurality of openings comprises at least one spiral array of openings formed on said ~~face~~ at least one of said first and second end faces.

6. (currently amended) The device according to claim 1 wherein said plurality of openings comprises an irregular array of openings formed on said ~~face~~ at least one of said first and second end faces.

7. (currently amended) The device according to claim 1 wherein said plurality of openings comprises plural radially-extending rows of openings formed on said ~~face~~ at least one of said first and second end faces.

8. (currently amended) The device according to claim 1, further comprising a ~~rotary disc~~ rotor assembly comprising said at least one rotary disc together with at least one additional rotary disc mounted for rotation therewith, said at least one additional rotary disc ~~comprising a plurality of cavitation-~~

~~inducing openings formed therein,~~ having third and fourth end faces facing more axially than radially and a peripheral outer surface, a plurality of cavitation-inducing openings opening on at least one of said third and fourth end faces and disposed radially outwardly from said axis of rotation and radially inwardly of said peripheral outer surface, said at least one rotary disc and said at least one additional rotary disc being axially spaced apart from one another to define a subchamber within said chamber.

9. (currently amended) The device according to claim 1 ~~wherein said drive shaft is formed with a fluid passageway, said fluid passageway connecting said at least one inlet passage with said at least one additional rotary disc comprising a plurality of cavitation-inducing openings plurality of openings~~ wherein at least one of said first and second faces is disposed perpendicular to said axis of rotation.

10. (currently amended) The device according to claim 1 ~~wherein said housing includes a fluid port and where said fluid port is arranged to connect~~ further comprising at least one fluid port disposed in said housing and connecting said at least one fluid inlet ~~passage~~ to said internal chamber, said at least one fluid port has its longitudinal axis disposed parallel to said axis of rotation.

11. (currently amended) The device according to claim [[1]] 9 wherein ~~the longitudinal axis of said drive shaft is coincident with said axis of rotation and where said drive shaft includes a threaded male portion and said rotor disc includes a centrally disposed threaded female aperture, and wherein said threaded female aperture of said rotor disc and said threaded male portion of said drive shaft co-operate together in the fully assmbled condition and where the rotational direction of said drive shaft and said rotor disc is opposite to the direction of the threaded co-operation~~ said rotary disc comprises a perforated element and a plate element, said perforated element and said plate element joined together and rotatable in unison with said drive shaft.

12. (currently amended) A fluid heating device comprising a housing; a chamber in said housing and a rotor ~~in the form of~~ comprising at least one rotary disc ~~element~~ disposed in said chamber and dividing said chamber into first and second regions, the first region lying axially to one side of said rotary disc element and the second region lying to the opposite side of said rotary disc element, said rotor having a maximum radial extent greater than its maximum axial extent; a drive shaft rotatably supported in said housing for imparting mechanical energy to said rotor

~~assembly~~, said drive shaft having a longitudinal axis of rotation and said ~~rotor~~ rotary disc mounted on said drive shaft for rotation about said longitudinal axis; at least two bearings disposed in said housing and where one respective bearing is disposed nearer the first region and another respective bearing is disposed nearer the secondn region; a fluid inlet ~~disposed in said housing and lying substantially near to said longitudinal axis~~ and a fluid outlet ~~disposed in said housing and lying radially outwardly of said fluid inlet~~ in fluid communication with said chamber, said fluid inlet and fluid outlet each opening exteriorly of said housing; said ~~rotor~~ rotary disc having a plurality of openings ~~formed~~ opening on at least a face thereof and extending into the interior of said at least one rotary disc in a substantially perpendicular direction with respect to said axis of rotation, said openings confronting fluid entering at least one of said first and second regions, wherein rotation of said rotary disc causes said plurality of openings to impart heat-generating cavitation to a fluid entering said at least one of said first and second regions.

13. (currently amended) The fluid heating device according to claim 12 wherein said fluid ~~outlet lies radially outwardly~~

~~of said rotor~~ inlet lies nearer to said longitudinal axis than said fluid outlet.

14. (currently amended) The fluid heating ~~apparatus~~ device according to claim 12 ~~wherein said openings in are staggered formation and alternatively opposed to one another from respective sides of said at least one disc element~~ further comprising a fluid port in said housing and where said fluid port is arranged to connect said fluid inlet to one of said first and second regions.

15. (currently amended) A fluid heating device comprising a housing; a chamber in said housing and a rotor ~~in the form of~~ comprising at least one rotary disc ~~element~~ disposed in said chamber, said at least one rotary disc ~~element~~ having a maximum radial extent greater than its maximum axial extent and dividing said main chamber into a centrally disposed inlet chamber, a radially outwardly disposed exhaust chamber and an intermediate fluid heat generating chamber; a drive shaft rotatably supported in said housing by a pair of bearings and where said rotor is positioned in between said pair of bearings, said drive shaft having an inner end disposed in said housing and an outer end disposed outwardly of said housing for receiving

power input, said drive shaft for imparting mechanical energy to said at least one disc ~~element, said drive shaft~~ and having a longitudinal axis of rotation and said at least one disc ~~element~~ mounted on said drive shaft for rotation about said longitudinal axis; a fluid inlet disposed in said housing ~~and lying substantially near to said longitudinal axis~~ and communicating with said inlet chamber; a fluid outlet disposed in said housing and lying radially outwardly of said fluid inlet, said fluid ~~exit~~ outlet communicating with said exhaust chamber; said fluid heat generating chamber comprising at least one pair of first and second opposing fluid boundary defining surfaces axially spaced apart from one another along at least the substantive radial length of said at least one rotary disc ~~element~~ and where the second boundary defining surface comprises an interior housing wall; said at least one rotary disc ~~element~~ having a plurality of openings ~~formed~~ opening on at least a face thereof and extending into the interior of said at least one rotary disc in a substantially perpendicular direction with respect to said axis of rotation, said plurality of openings disposed to open on the first boundary defining surface, and wherein rotation of said at least one disc element causes said plurality of openings to impart heat-generating cavitation to a fluid entering said fluid heat generating chamber.

16. (currently amended) The device according to claim 15 ~~where~~ wherein said at least one pair of first and second opposing fluid boundary defining surfaces provide the sole pathway for fluid on entering said inlet chamber to reach said exhaust chamber, and wherein said at least a face thereof is disposed perpendicular to said longitudinal axis.

17. (currently amended) A method of heating fluids, comprising causing a fluid to enter at least one inlet passage of a device comprising a housing having an internal chamber, a rotary disc mounted for rotation within said chamber about an axis of rotation, said rotary disc having a maximum radial extent greater than its maximum axial extent, said rotor disc having first and second end faces facing more axially than radially and a peripheral outer surface, a drive shaft for imparting mechanical power to said rotary disc, and said rotary disc drivingly connected to said drive shaft, at least two bearings disposed in said housing and said drive shaft rotatably supported in said housing by said at least two bearings where one respective bearing is disposed nearer the first end face and another respective bearing is disposed nearer the second end face; at least one inlet passage and at least one outlet passage formed in said housing, ~~said at least one inlet passage being disposed radially closer to said axis of rotation~~

~~than said at least one outlet passage,~~ said rotor disc having a plurality of openings ~~formed~~ opening on at least ~~a face thereof~~ one of said first and second faces and disposed radially outwardly of said axis of rotation and radially inwardly of said peripheral outer surface, said plurality of openings extending into the interior of said rotary disc in a substantially perpendicular direction with respect to said axis of rotation, said openings confronting fluid entering said chamber, while rotating said rotary disc at a speed sufficient to cause said plurality of openings to impart heat-generating cavitation to a fluid entering said chamber.

18. (currently amended) The method according to claim 17, wherein said device further comprises a rotary disc assembly comprising said rotary disc together with at least one additional rotary disc mounted for rotation therewith, said at least one additional rotary disc comprising a plurality of cavitation-inducing openings ~~formed therein~~ opening on at least a face thereof and extending into the interior of said at least one additional rotary disc in a substantially perpendicular direction with respect to axis of rotation, said rotary disc and said at least one additional rotary disc being axially spaced apart from one another to define a subchamber within said chamber, and wherein said

method further comprising causing said fluid to enter said subchamber while rotating said rotary disc assembly.

19. (new) The device according to claim 1 wherein at least one of said first and second end faces is angularly inclined relative to said axis of rotation.

20. (new) The device according to claim 1 wherein said fluid inlet is disposed radially closer to said axis of rotation than said fluid outlet.

21. (new) The device according to claim 1 wherein said at least one rotary disc comprises a perforated element and a plate element.

22. (new) The device according to claim 21 wherein said perforated element is manufactured as a stamping.

23. (new) The device according to claim 12 wherein said at least one rotary disc comprises a perforated element and a plate element.

24. (new) The device according to claim 12, further comprising an additional plurality of openings opening on another face of said rotary disc and extending into said

interior of said rotary disc in a substantially perpendicular direction with respect to said axis of rotation, wherein respective said plurality of openings disposed on opposing faces of said rotary disc are disposed in a staggered formation.

25. (new) The device according to claim 14 further comprising fluid passageways disposed in said drive shaft, said fluid passageways connecting said fluid inlet to the other one of said first and second regions.

26. (new) The device according to claim 15 further comprising fluid passageways disposed in said drive shaft, said fluid passageways connecting said fluid inlet to that one of said pair of fluid boundary surfaces disposed furthermost from said fluid inlet.

27. (new) The device according to claim 15 wherein said at least one rotary disc comprises a perforated element and a plate element, said perforated element and said plate element joined together and rotatable in unison with said drive shaft.

28. (new) The device according to claim 15 further comprising a fluid seal disposed in said housing and

surrounding said drive shaft, said seal residing in said housing opposite to said fluid inlet, and where said inner end of said drive shaft is exposed to said fluid inlet.